

she soon returned alone to his rescue. She ascended and took him in her arms, at which moment she was shot; the ball passing through the fore arm of the young one in its course to the heart of the mother. Other instances have been known in which the mother, otherwise timid and fleeing from the presence of man, forsaken by her mate, has fallen a sacrifice to the force of natural affection. In a recent case, the mother, when discovered, remained upon the tree with her offspring, watching intently the movements of the hunter. As he took aim, she motioned with her hand precisely in the manner of a human being, to have him desist and go away. When the wound has not proved instantly fatal, they have been known to stop the flow of blood by pressing with the hand upon the part, and when this did not succeed, to apply leaves and grass.

When shot they give a sort of screech not very unlike that of a human being in sudden and acute distress. In their gambols, their cry is like the whoop of a native, varied as to volume and strength, which, with the drumming upon logs and other discordant noises and various uncouth movements, make up a scene perfectly unique, defying all description.

ART. XXXI.—DESCRIPTIONS AND FIGURES OF THE ARANEIDES OF THE UNITED STATES. BY NICHOLAS MARCELLUS HENTZ, Florence, Alabama.

[Continued from page 231.]

3. LYCOSA LENTA.

Plate XVII. Figs. 1—4.

Description. Piceous, hairy; cephalothorax, with a waved fascia of a dark color and several pale marks. Abdomen with two longitudinal rows of indistinct black spots above, beneath with a large black spot, with a yellowish mark in the centre. A pale variety occurred in North Carolina, without the yellow mark.

Observations. This common and powerful species is found wandering in fields, attacking and subduing very large insects. The female carries her young on her back, which gives her a horrible appearance. If caught or wounded, the little ones escape rapidly in all directions; but the mother is faithful to her duties, and defends her progeny while life endures. It hides under stones, logs, &c.

Habitat. Pennsylvania, North and South Carolina, &c.

4. LYCOSA RURICOLA.

Plate XVII. Fig. 5, 6.

Description. Pale or livid testaceous, cephalothorax with black marks, two large ones at base; chelicères black with yellow hair at base; abdomen varied with black marks and pale dots above, a large black spot underneath; feet with indistinct livid rings.

Observations. A male and a female of this species were found with a white spot in the middle of the black one on the venter, but as the marking differed somewhat from the above, they may constitute a different species. They are always found wandering on the ground.

Habitat. Carolina, Alabama. October, November.

5. LYCOSA SALTATRIX.

Plate XVII. Fig. 7.

Description. Piceous, cephalothorax with two darker longitudinal bands; abdomen plumbeous or mouse colored, with four dark points and a pale longitudinal line; legs hairy, with many dark bands. Male inclining to a rufous tinge.

Observations. This small spider, first found in South Carolina, runs about on the ground, the female carrying her cocoon attached to the hinder part of her abdomen. When deprived of it, she remains near; and, if allowed, she grasps it in her chelicères and carries it off. The cocoon, of a slate color, is orbicular, and contains about fifteen eggs. This is probably

related to *Aranea saccata* of Europe. I have found in Alabama a spider, which may not differ specifically from this, which was larger and of a mouse color, with very indistinct markings, except its legs, which agreed with the drawing accompanying this. Its cocoon, which it carried in the usual way, was also of a bluish pale slate color, but it was lenticular, being composed of two concave plates of strong texture, united loosely at the edge; and it contained about sixty yellow eggs — notwithstanding the apparent difference, I refer it to this species. It is probable, however, that future naturalists will define two or more species, which I may have confounded or referred to this description.

Habitat. The United States.

6. LYCOSA ERRATICA.

Plate XVII. Fig. 8.

Description. Brown or piceous; cephalothorax with one longitudinal blackish line each side; abdomen with a forked longitudinal fascia and several spots black, a large black spot underneath, sometimes a white spot surrounded with black; male the same.

Observations. This species, which becomes very large, I formerly supposed to be a variety of *L. lenta*; but it was always found wandering and never in holes; I therefore consider it as perfectly distinct, having been often seen, generally running in the grass.

Habitat. Massachusetts, Alabama.

7. LYCOSA LITORALIS.

Plate XVII. Fig. 9.

Description. Livid white; cephalothorax varied with livid gray markings; abdomen with a pale waved fascia; feet and palpi with some hairs, and with pale gray rings on all joints, 4. $\overbrace{1. 3. 2.}$ the 1st visibly longer than the 3d, the 3d full as long if not longer than the 2d.

Observations. This distinct species is always found near water under boards, leaves, stones, &c., moving chiefly by jumps, when escaping. Often observed in the same localities.

Habitat. North Carolina. April.

8. LYCOSA MARITIMA.

Plate XVII. Fig. 10.

Description. Pale yellow, almost white; cephalothorax with faint indented lines; abdomen with two longitudinal rows of dots of a pale hue.

Observations. This spider was found on the beach of Bear Island in the bay of St. Helena, South Carolina. Dr. Charles Pickering sent me one from Salem, informing me that it is common in Massachusetts. It runs with great speed on the sand still wet with the ebbing water of the ocean.

Habitat. South Carolina, Massachusetts, and probably all the Atlantic coast.

9. LYCOSA ASPERSA.

Plate XVII. Fig. 11, 12.

Description. Greenish obscure; cephalothorax dark, obscure, varied with black marks and a few red lines about the eyes; cheliceres very large; abdomen obscure, with small black spots in three rows, varied with yellow and black in wrinkles underneath, feet with black rings.

Observations. Though it is excessively difficult to distinguish between species and varieties in this subgenus, yet I must consider this as distinct from *L. riparia*. It was found on a barren hill at a great distance from water.

Habitat. Alabama, September.

LYCOSA RIPARIA.

Plate XVII. Fig. 13—15.

Description. Brownish or greenish black; cephalothorax varied with blackish, with a narrowed yellowish line which

reaches the trophi; abdomen above with triangular black spots more or less interrupted, and a row on each side of whitish dots more distinct towards the apex, a tuft of black and of white hairs at base in both sexes; beneath testaceous or yellow, speckled with dots, and a line and two spots near the base sometimes wanting, black; feet with black or greenish brown rings. 4. $\overbrace{1. 2. 3.}$ In the male, the two rows of white dots on the abdomen are arranged in the form of interrupted lines, and the rings are obsolete on the feet, which are long, slender and hairy.

Observations. This common spider is aquatic in its habits, always found near or on water, and diving with ease under the surface, when threatened or pursued.

Habitat. North Carolina, Alabama. All seasons.

11. LYCOSA PUNCTULATA.

Plate XVII. Fig. 16, 17.

Description. Pale rufous; cephalothorax whitish or yellowish, with four longitudinal blackish lines; abdomen whitish or yellowish, with a longitudinal band, blackish, whitish underneath, with many black dots.

Observations. This spider captured at Germantown, was communicated to me by Dr. Charles Pickering. It was found also in Alabama, in November, agreeing in every respect with the description. It was a male also. A female was found September 28th agreeing with the design. The species is therefore well established.

Habitat. Pennsylvania.

12. LYCOSA SCUTULATA.

Plate XVIII. Fig. 2.

Description. Testaceous; cephalothorax with one longitudinal band and one line on each side, blackish; abdomen with a longitudinal broad band, blackish, with about four diagonal spots, and a narrow edge, each side of it yellowish;

same color underneath, with very minute black dots on the abdomen; legs brownish with some blackish lines. Male with the first pair of legs mostly black, and part of the fourth pair also black underneath.

Observations. This common and very distinct species attains a very large stature. It is most commonly found wandering in quest of prey, and like *Lycosa saltatrix*, carries its cocoon attached to the abdomen behind. The cocoon is very large, spherical and whitish, containing from one hundred and fifty to two hundred eggs, which hatch before the cocoon is opened. The yellow spots on the abdomen seem to be wanting in the young. *Habitat.* Alabama.

13. LYCOSA SAGITTATA.

Plate XVIII. Fig. 3, 4.

Description. Yellowish brown; cephalothorax with a pale longitudinal band; abdomen dusky also, with a pale band with angular edges, whitish underneath, with minute black dots and two curved black bands which join together at base and at the apex where they spread out; pulmonary region brownish; feet varied with blackish.

Observations. This species is distinct from any other. It was found wandering, and seems to be rare.

Habitat. North Alabama. April.

13. LYCOSA OCREATA.

Plate XVIII. Fig. 5.

Description. Obscure; cephalothorax, with a broad, pale longitudinal band, with a blackish edge; abdomen blackish at base, the black spreading each side, with a few black dots each side towards the apex; feet varied with brown or blackish; antepenult joint of the first pair large, black and hairy, the intermediate one and the thigh black at tip; feet, 4. $\overbrace{1. 2. 3.}$ A male.

Observations. This species is not rare, in meadows, near water. *Habitat.* North Carolina.

14. LYCOSA VENUSTULA.

Plate XVIII. Fig. 6. 7.

Description. Cephalothorax yellowish, with two bands and edge black; abdomen piceous, paler in the middle towards the base, with a row of abbreviated black lines approximating towards the apex, pale gray underneath, with a row of minute black dots each side approximating towards the apex; feet, rufous. A middle size species.

Observations. This spider is common on the ground, but inasmuch as only males are found, it is likely it will ultimately be referred to some other species; which, I cannot tell.

Habitat. Alabama. April.

15. LYCOSA MILVINA.

Plate XVIII. Fig. 8.

Description. Pale yellowish; cephalothorax varied with brownish; abdomen brownish with a scolloped band, widening towards the base, and two lateral spots yellowish, pale yellowish spotless underneath; feet varied with brownish, hairy, particularly the third and fourth pair. A small species.

Observations. This is a very distinctly marked species, which occurred only once.

Habitat. Alabama. September.

16. LYCOSA SAXATILIS.

Plate XVIII. Fig. 9, 10.

Description. Pale bluish; cephalothorax varied with greyish; abdomen greyish or blackish, with pale bluish spots or dots, pale grey underneath; feet long and slender, hairy, with many black rings. 4. $\overbrace{2. 1. 3.}$ or 4. $\overbrace{2. 3. 1.}$ A small species.

Observations. This slender little *Lycosa* is a very distinct species. It runs with surprising agility and swiftness. It was found in the mountains of North Alabama.

Habitat. Alabama. August.

17. LYCOSA FUNEREA.

Plate XVIII. Fig. 11.

Description. Cephalothorax blackish; abdomen with four approximate spots and four bent lines yellowish; feet varied with rufous and blackish. A small species.

Observations. This species abounds on the ground. It has the habitus of a *Herpyllus*, and runs with great rapidity. The male and the female were often found agreeing with the description.

Habitat. Alabama. May.

Genus. CTENUS. Walck.

Characters. *Cheliceres* large, fangs moderately large; *maxillæ* short, parallel, cut obliquely at tip; lip about half the length of the *maxillæ*, pointed; eyes eight, unequal, in three rows, two eyes of middle size form the lowest row, intermediate row composed of four eyes, the two middle ones largest, the two external ones smallest; last row formed of two large eyes, borne on tubercles and placed farther apart than those of the middle row; feet, fourth pair longest, then the first, then the second, the third being shortest.

Habits. Araneïdes wandering for prey, making no web for a dwelling.

Observations. This subgenus seems to be related to *LYCOSA* and *DOLOMEDES*.

1. CTENUS HYBERNALIS.

Plate XIX. Fig. 1—4.

Description. Deep rufous; cephalothorax black above with a longitudinal yellowish band; abdomen black, with a serrated longitudinal yellow band above, and with four diagonal lines of minute yellow dots beneath.

Observations. This was found in a cavity in the ground in the month of January.

Habitat. South Alabama.

2. CTENUS PUNCTULATUS.

Plate XIX. Fig. 5, 6.

Description. Yellowish rufous; cephalothorax, with two longitudinal blackish lines and two fainter scalloped ones on each side; abdomen with two subobsolete lines of minute white dots, becoming more distinct towards the apex, where may be seen a few irregularly placed white dots on the outside of the lines, same color unspotted beneath; feet, 4. 1. $\widehat{2. 3.}$ or 4. 1. $\widehat{3. 2.}$

Observations. This spider was found at the foot of a tree in a moist place near a mountain stream, running through a forest.

Habitat. Alabama. August, September.

GENUS. DOLOMEDES. Latr.

Characters. *Cheliceres* moderately large; *maxillæ* short, parallel, somewhat wider above the insertion of the palpi; lip short, suborbicular; eyes eight, unequal, in two rows, the anterior one slightly curved, the posterior one wider and much curved from the base towards the anterior one; exterior eyes borne on tubercles; feet, the fourth, second, and first pair are nearly equal, the third being the shortest.

Habits. Araneides wandering after prey, making no web, except during the rearing of the progeny, hiding under stones, sometimes diving under water; cocoon usually orbicular, carried by the mother.

Observations. The subgenus DOLOMEDES is the link between CTENUS and LYCOSA, and its characters are somewhat variable. In the first tribe, (the ARBOREÆ) which differ wholly from the SYLVARIA of Walckenaer, the arrangement of the eyes is almost that of LYCOSA; and in the Ripuaria, the arrangement of the eyes leads to MICROMMATA. The spiders of this genus differ in their habits also; those of the two first tribes dwell on trees, or in cavities; those of the third are found near water, and run on its surface with great rapidity; they can even dive, and have recourse to this when in danger.

Several, perhaps all species, construct on bushes a web somewhat like that of *AGELENA*, for the protection of the cocoon, and the rearing of the young. This is another resemblance to *MICROMMATA*.

Order of the species DOLOMEDES.

Tribe I. *ARBOREÆ*, middle eyes much larger than the rest.

Tribe II. *TENEROSÆ*, eyes subequal, lower row as much curved as the upper.

Tribe III. *RIPUARIA*, eyes subequal, lower row straight or slightly curved.

(*Arboreæ.*) 1. *DOLEMEDES TENAX*.

Plate XIX. Fig. 7.

Description. Grayish; cephalothorax edged with black, varied with blackish on the disk; abdomen also edged with black near the base, varied longitudinally, with blackish on the disk, about three whitish dots on each side near the apex, pale beneath, with two obscure longitudinal lines; feet, with blackish bands above, pale beneath. $\overbrace{4. 2. 1. 3.}$ Never large.

Observations. This distinct species is always found on upright sticks, small trees, &c. turning round to avoid an attack in the same manner as *OXYOPES scalaris*, which it resembles so much that for a time I could not distinguish one from the other. It spreads its feet like *THOMISUS*. The form of its cephalothorax is peculiar, the *head* being elevated and well-defined from the thorax. It must not be taken for the young of *D. tenebrosus*, which resembles the old, and dwells in dark places, whereas this is quite a diurnal species, fond of broad daylight.

Habitat. North Carolina.

2. *DOLOMEDES HASTULATUS*.

Plate XVIII. Fig. 9.

Description. Pale or greenish gray; cephalothorax varied with blackish; abdomen with a blackish band, with rounded

edges near the base, and terminating with a hastate point towards the apex; feet varied with gray or blackish. $\overbrace{2. 4. 1. 3.}$

Observations. This was found in September in a web, like that of ANGELENA. This can be readily distinguished from *D. tenax*, particularly by the form of its cephalothorax, in which the head is not elevated as in that species. The second pair of legs being sensibly the longest. This species could almost be referred to MICROMMATA. It was found in March upon the stump of a tree not far from a stream.

Habitat. Alabama. September.

(Tenebroszæ.) 3. DOLOMEDES TENEBROSUS.

Plate XIX. Fig. 10, 13.

Description. Livid brown; abdomen and cephalothorax varied with blackish angular markings; feet annulated with blackish; frequently measuring over four inches from the extremity of the first pair of legs to that of the fourth pair; male with legs 1. 2. 4. 3.

Observations. This spider, one of the largest of the whole family, is very common in dark, retired places, hiding in crevices during the day, and issuing at night from its retreat for the purpose of seeking for prey. It does not seek the vicinity of water near which it was never seen, but dwells generally in elevated dry places. The female does not make a web, but carries its cocoon, grasped with her cheliceres. The cocoon is orbicular whitish, and of the size of a common cherry. I have occasionally seen this Dolomedes in the daytime, but it seemed always inactive, and easily captured. It can be readily distinguished from *D. albineus*, by its having no yellowish spot under the abdomen, and by the white hairs on its legs.

Habitat. Carolina, Alabama, Massachusetts?